



FINDING OF NO SIGNIFICANT IMPACT (FONSI)

EMPLOYEE HOUSING (SOUTH RIM) GRAND CANYON NATIONAL PARK

The National Park Service (NPS) proposes construction of two multi-unit dwellings to be made available to employees working in Grand Canyon National Park (GRCA). The employee housing will consist of the construction of two two-story apartment buildings consisting of a total of 16 apartments. The proposed activities will occur at the intersection of Mojave and Albright Streets within Grand Canyon Village, Grand Canyon National Park, Coconino County, Arizona and will implement a portion of the *1995 General Management Plan* (GMP) for GRCA. The proposed action will provide critically needed housing for Park employees on the North Rim. Work will begin in fall 2003 for the new housing facilities.

The proposed activity is part of a comprehensive effort under the 1995 GMP to accommodate needed housing while minimizing resource impacts and conflicts. The proposed housing is needed because existing facilities cannot adequately accommodate current needs for employees. Although visitation numbers have fluctuated, NPS estimated that visitation would increase along the South Rim by 25 percent from 1997 to 2025 (G. Wright, GRCA, pers. comm. 2001). The 1995 *Final General Management Plan and Environmental Impact Statement, Grand Canyon National Park* (GMP EIS) contains the pertinent statements related to proposed changes in the housing areas at Grand Canyon Village. The number of proposed housing units to be built is included as part of the GMP figure. The proposed housing development is well away from the canyon rim (approximately 0.5 miles), in an area that will not be seen by visitors. The proposed action (construction of employee housing) is intended to implement the above provisions of the GMP. None of the needs identified in the GMP have changed significantly.

This Environmental Assessment/Assessment of Effect evaluates two Alternatives for addressing the purpose and need for action, including a No Action Alternative and an Action Alternative. The Action Alternative includes compaction and displacement of soil and removal and possible relocation of vegetation within the 1.6 acre project site. The action may affect, but is not likely to effect threatened or endangered species of animals (California condor or Mexican spotted owl). There may be impacts from increased human presence to one cultural site located approximately 30-50 ft outside of the construction perimeter that can be reduced through implementation of a mitigation plan (in accordance to discussions with the AZ SHPO). Implementation of the preferred alternative will not affect historic resources and a "no historic properties affected" determination has been made.

Between June 2001 and June 2003 the National Park Service (NPS) prepared an *Environmental Assessment/Assessment of Effect (EA/AEF)* to construct *Employee Housing* on the South Rim. This EA/AEF, in accordance with the National Environmental Policy Act, analyzes the impacts resulting from the construction of 2 new eight-plexes within the established employee housing area within the South Rim developed area.

ALTERNATIVES CONSIDERED, INCLUDING THE PREFERRED ALTERNATIVE

ALTERNATIVES CONSIDERED

The environmental assessment/assessment of effect evaluated two alternatives: the preferred, described below as the proposed action and a no-action alternative in which existing conditions and management of the areas would continue. The no-action alternative was determined to not meet the objectives of the project and was not in the best interest of the visiting public or providing needed housing for employees.

The proposed action will provide critically needed housing, in accordance with the GMP, to employees on the South Rim.

Employee Housing

The proposed employee housing facility will be constructed on a project site located on the east side of Mojave Street, just south of Albright Avenue and will consist of two 9,576-square foot two-story housing buildings, 32 paved parking spaces, and associated utility and infrastructure connections. Construction of the housing units will result in ground disturbance to approximately 1.6 acres. The housing units will be built in conformance with the Architectural Barriers Act of 1968 (P.L.90-480), the Rehabilitation Act of 1973 (P.L.93-112), and the 1984 Uniform Federal Accessibility Standards (UFAS), 49 CFR 31528. Much of the necessary existing underground utility infrastructure is in place. Connection of new structures to these existing utilities will be required and any undersized or substandard utilities will be replaced. Any necessary utilities not already in place will be provided. The two 8-plexes will be constructed to ensure that the buildings are in character with other housing in this area of the South Rim Village and with the general character of buildings within GRCA. Construction could begin as early as fall of 2003.

MITIGATING MEASURES

The following mitigation has been selected to minimize, reduce or eliminate impacts of the proposed action:

Contractor Orientation

Contractors working in GRCA are given orientation concerning proper conduct of operations. This orientation is provided in both written form and orally (at a pre-construction meeting). This policy would apply to both construction projects. Orientation topics for the employee housing work would include:

- Wildlife should not be approached or fed.
- Cultural resource material should not be collected.
- If any cultural objects are found, all work will cease until an archaeologist clears the site.
- Collecting of any GRCA resources, including plants, animals and cultural resources, is prohibited.
- Contractor must have a safety policy in place and follow it.
- Contractor must have a hazardous materials spill plan in place and follow it.
- All trash and scrap construction materials will be cleaned up immediately.
- Other environmental concerns and requirements discussed elsewhere in this EA/AEF would be addressed.

Air Quality

To minimize impacts to local air quality, water would be applied as a dust-control agent as necessary during construction. Unnecessary engine idling would not be permitted; idling would be allowed only to the amount needed to ensure proper equipment operation.

If asphalt is used for the parking areas at the proposed 8-plex site, an emulsion-based asphalt is preferred to a solvent-based ("cutback") asphalt. If it is necessary to use cutback asphalt, slower-curing asphalts would

reduce pollutant concentrations. The pollutants of concern are volatile organic compounds (VOCs), which play a major role in ozone formation. If an asphalt batch plant is used, it should be propane fired, (batch plants can also be fired by diesel/fuel oil or tires).

Noise

Construction activities will raise noise levels in the vicinity above the ambient conditions. Noise sources include vehicles and power tools. To minimize noise impacts during construction, noise production would not occur during the overflight curfew hours from 6:00 p.m. to 8:00 a.m. between May 1 to September 30, and from 5:00 p.m. to 9:00 a.m. between October 1 to April 30.

Water Quality

To minimize potential impacts to water quality, the following mitigation measures would be incorporated into the action alternative:

- All NPDES requirements would be met.
- Standard erosion control measures such as silt fences, sand bags, or equivalent control methods would be used to minimize any potential sediment delivery to streams.

Exotic Animals

To prevent the importation of exotic animals such as rats and mice, all construction materials would be inspected. Such inspections should be conducted through consultation with the GRCA Integrated Pest Manager.

Exotic Vegetation and Noxious Weeds

To prevent the introduction and minimize the spread of exotic vegetation and noxious weeds, the following mitigation measures would be incorporated into the action alternative.

- Existing populations of exotic vegetation at the construction site would be treated prior to construction activities.
- All heavy construction equipment that would leave the road (e.g., bulldozers and backhoes) would be pressure washed prior to entering GRCA.
- The location of the staging area for construction equipment would be park-approved and treated for exotic vegetation.
- Parking of vehicles would be limited to existing roads or the staging area.
- Any fill, rock, or additional topsoil needed would be obtained from a park-approved source.
- All areas disturbed by construction would be revegetated using site-adapted native seed and/or plants.
- Monitoring and follow-up treatment of exotic vegetation would occur for 2 to 3 years after construction is completed.

California Condor

To protect the California condor, the following mitigation measures would be incorporated into the action alternative.

- Prior to the start of a construction project, the GRCA would contact personnel monitoring California condor locations and movement within the GRCA to determine the locations and status of condors in or near the project area.

- If non-nesting condors occur within one mile of the project area, blasting, if required, would be postponed until the condors leave or are hazed by permitted personnel.
- If condor nesting activity is known within one mile of the project area, then blasting activity if required, would be restricted during the active nesting season. The active nesting season is February 1 – September 30. These dates may be modified based on the most current information, in consultation with the GRCA biologist and the USFWS.
- If condor nesting activity is known within 0.5 mile of the project area, then light and heavy construction (see Appendix D for definitions of light and heavy construction activity) in the project area would be restricted during the active nesting season. The active nesting season is February 1 – September 30. These dates may be modified based on the most current information, in consultation with the GRCA biologist and the USFWS.
- If a condor occurs at the construction site, construction would cease until it leaves on its own or until techniques are employed by permitted personnel which results in the individual condor leaving the area.
- Construction workers and supervisors would be instructed to avoid interaction with condors and to immediately contact the appropriate GRCA or Peregrine fund personnel if and when condor(s) occur at a construction site.
- The construction site would be cleaned up at the end of each day the work is being conducted (i.e. trash disposed of, scrap materials picked up) to minimize the likelihood of condors visiting the site. GRCA Condor staff will complete a site visit to the area to ensure adequate clean-up measures are taken.
- To prevent water contamination and potential poisoning of condors, a vehicle fluid- leakage and spill plan would be developed and implemented for each construction project. GRCA has a parkwide fluid-leakage and spill plan that applies to each construction project.
- If a new structure occurs on the rim or above tree line in other areas, there may be a need to install condor deterrent devices on the structure. This would be evaluated on a case-by-case basis by the park wildlife biologist.

Mexican Spotted Owl

To protect the Mexican Spotted Owl (MSO), the following mitigation measures would be incorporated into the action alternative.

- If a construction project occurs within a Protected Activity Center (PAC) with no known nest site, then all construction activity would be restricted to the non-breeding season (September 1 – February 28). However, if the project in a PAC is at least 0.5 mile from known nest sites and the project does not include blasting, then the project can be implemented during the breeding season. The breeding season is March 1 – August 31.
- If a construction project outside of PACs occurs within one mile of a known PAC nest or roost site, or the boundary of a PAC where the nest or roost site is not known, or unsurveyed restricted, protected, or predicted MSO habitat, then all blasting, if required in that project area, would be restricted to the non-breeding season (September 1 – February 28).
- If a construction project outside of PACs occurs within 0.5 mile of a known PAC nest or roost site, or the boundary of a PAC where the nest or roost site is not known, or unsurveyed restricted, protected, or predicted MSO habitat, then light and heavy construction activity (see Appendix D for definition of light and heavy construction activity) in that project area would be restricted to the non-breeding season (September 1 – February 28).
- Exceptions to the above measure are those situations where a project is within the developed urban zone (urbanized portion of Grand Canyon Village). If such projects are more than 0.25 mile from the MSO situations outlined above, then light construction activity (as defined in this document) can occur at any time for those projects.

- Surveys of MSO habitat would follow all aspects of standard protocol.

Northern Goshawk and Peregrine Falcon

Blasting, if required, would be limited to the non-breeding season for Northern goshawk and peregrine falcon (September 1 through January 31).

Blasting

Blasting is not anticipated for this project. The contractor would investigate all reasonable and prudent alternatives to the use of explosives for blasting, and shall not use explosives unless deemed necessary. If blasting is necessary, the following mitigation measures will apply (in addition to those measures discussed above for California condor, Mexican spotted owl, Northern goshawk, and peregrine falcon regarding blasting).

- Blasting mats would be used to minimize air blast and fly rock.
- Controlled/sequential blasting techniques would be employed to minimize blast noise.
- Only the minimum amount of charge necessary to meet the objectives would be used.
- The blasting safety plan and shot design would be reviewed by NPS.

Architectural Guidelines

Architectural styles and finishes of the employee 8-plexes would be differentiated yet compatible with other buildings in the South Rim Village non-historic residential housing area.

Cultural Resources

To minimize the impacts of construction activities on cultural resources, the following mitigation measures would be incorporated into the action alternative.

- If previously unknown archeological resources are discovered during construction, all work in the immediate vicinity of the discovery would be halted until the resources could be identified and documented.
- An appropriate mitigation strategy would be developed, if necessary, in accordance with the stipulations of the 1995 *Programmatic Agreement Among the National Park Service; the Arizona State Historic Preservation Officer; and the Advisory Council on Historic Preservation Regarding the Draft General Management Plan/Environmental Impact Statement, GRCA, Arizona*.
- All workers would be informed of the penalties for illegally collecting artifacts or intentionally damaging any archeological or historic property.
- Workers would be informed of the correct procedures if previously unknown resources are uncovered during construction activities.
- Data recovery excavations would be carried out to mitigate adverse affects as outlined in the section on environmental consequences.
- Any staging areas (equipment yards or other construction-related activities) would occur within the designated limits of disturbance or at a maintenance yard approximately 1 block away.
- No construction vehicle movement would occur outside the construction access limits.
- Vegetation would be preserved and protected outside of the specified clearing limits.
- The contractor would remove only trees when specifically authorized to do so by NPS and would avoid damaging vegetation that is to remain in place.

- Archeological surveys have been conducted to identify resources in the area of potential effect. Should unknown buried deposits be located, data recovery excavations would be undertaken. These subsurface investigation and data recovery efforts would be guided by a project-specific research design. Additionally, NPS would begin consultations under the Native American Graves Protection and Repatriation Act in the event that buried human remains are discovered during archeological excavations or project development.
- In accordance with discussions with the AZ SHPO, a substantial fence will be placed around a prehistoric site adjacent to the construction perimeter to protect it until data collection can be completed.

Lighting

To minimize light pollution, the maximum level of outdoor lighting would comply with the requirements of Astronomical Zone 1 (most stringent) of the Coconino County Lighting Ordinance (Section 17).

ENVIRONMENTALLY PREFERABLE ALTERNATIVE

The Council on Environmental Quality (CEQ) provides direction that “[t]he environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA’s Section 101. The environmentally preferred alternative is determined by applying the criteria suggested in the National Environmental Policy Act of 1969 (NEPA), which guides the CEQ:

1. fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
2. assure for all generations safe, healthful, productive, and esthetically and culturally pleasing surroundings;
3. attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
4. preserve important historic, cultural and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice;
5. achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life’s amenities; and
6. enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Alternative A would not result in any new disturbance of natural resources (Criterion 1 partially met).

Alternative B will result in disturbance to 1.6 acres in a secluded developed park housing area. Alternative B allows accomplishment of the GMP stated goal of increasing employee housing on the South Rim. It could also improve safety (Criteria 1, 2, 3, 4 and 5 met).

Through the process of internal scoping, scoping with the public and other agencies, the environmentally preferred alternative was determined to be Alternative B. Alternative B would best meet the purpose and need for action while addressing the NEPA criteria stated above, overall Park Service objectives and other evaluation factors. No new information came forward from public scoping or consultation with other agencies to necessitate the development of any new alternatives, other than those described and evaluated in this document. The action alternative addresses the purpose and need for action and will fully achieve all identified project objectives.

WHY THE PREFERRED ALTERNATIVE WILL NOT HAVE A SIGNIFICANT EFFECT ON THE HUMAN ENVIRONMENT

As defined in 40 CFR §1508.27, significance is determined by examining the following criteria:

Impacts that may be both beneficial and adverse. The Action Alternative would result in negligible to minor, long-term adverse impacts to soils through compaction and displacement within the 1.6 acre site, site-specific negligible to moderate adverse impact to vegetation and minor to moderate long-term adverse impacts to one cultural site located approximately 30-50 ft outside of the construction perimeter that can be reduced through implementation of a mitigation plan. It may affect, but is not likely to adversely affect, the federally listed California condor or Mexican Spotted owl. Implementation of the preferred alternative will not affect historic resources and a "no historic properties affected" determination has been made.

Degree of effect on public health or safety. The preferred alternative may have a somewhat beneficial effect on public safety by allowing for more park staff to assist the park visitor.

Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas. As described in the environmental assessment, historic resources, prime farmlands, and wetlands will not be affected. No ecologically critical areas such as wild and scenic rivers will be affected by the preferred alternative. The project site is not in proposed wilderness.

Degree to which effects on the quality of the human environment are likely to be highly controversial. There were no highly controversial effects identified during either preparation of the environmental assessment or the public review period.

Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risks. There were no highly uncertain, unique or unknown risks identified in the environmental assessment or the public review period.

Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration. The preferred alternative neither establishes a precedent for future actions with significant effect nor represents a decision in principle about a future consideration.

Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Impacts of the preferred alternative identified in the environmental assessment were to vegetation, soils, wildlife and special status species, and cultural resources. As described in the environmental assessment, a variety of past, present, and reasonably foreseeable future actions have or may affect resources in the South Rim developed area. However, the adverse impacts of the preferred alternative will be a negligible component of the overall minor cumulative impacts, due to the limited scope of the preferred alternative.

Degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources. The project area was surveyed for archeological resources by park staff. One prehistoric site is located approximately 50 feet outside of the construction perimeter. A mitigation plan will be developed and implemented to resolve the anticipated adverse impact from increased pedestrian traffic finding per 1995 GRCA GMP Programmatic Agreement. The Arizona State Historic Preservation Office concurred (September 11, 2003 and again October 14, 2003) with the GRCA finding that a mitigation plan is necessary for the archaeological site; that the site will be protected by fence

during construction; that they will be provided with a mitigation plan for review and approval as soon as possible; and that the mitigation plan will be completed prior to occupancy of the apartments (anticipated Summer 2004).

Degree to which the action may adversely affect an endangered or threatened species or its critical habitat. The preferred alternative may affect but is not likely to adversely affect Mexican spotted owls or California condors. The incorporation of mitigation measures will minimize the impacts of ecosystem change to habitat. In June 2002, the U.S. Fish and Wildlife Service, Arizona Field Office, was sent a 'batch' Biological Assessment according to Section 7 (ESA) consultation procedures covering park-wide construction projects and concurred with the NPS determinations.

Whether the action threatens a violation of Federal, state, or local environmental protection law. The preferred alternative violates no federal, state, or local environmental protection laws.

IMPAIRMENT OF PARK RESOURCES OR VALUES

In addition to determining the environmental consequences of the preferred and other alternatives, National Park Service policy (*Management Policies*, 2001) requires analysis of potential effects to determine whether or not actions would impair park resources. The prohibited impairment is an impact that, in the professional judgment of the responsible National Park Service manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. A major impact to any park resource or value may constitute an impairment.

It has been determined that there will be no impairment of the Grand Canyon National Park's resource or values as a result of this project because there will be no major adverse impacts to a resource or value whose conservation is:

1. necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Grand Canyon National Park;
2. key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
3. identified as a goal in the park's general management plan or other relevant National Park Service planning documents.

PUBLIC INVOLVEMENT

Official public scoping was initiated on July 23, 2001 for a 30-day period. Affected agencies, affiliated tribes and the State Historic Preservation Office (SHPO) were sent a scoping letter. The construction of much needed housing within the South Rim developed area and associated public scoping was a topic of discussion at several of the monthly GRCA community meetings held at the Park between January 2001 and July 2003. A public scoping letter discussing the project was sent to a mailing list of approximately 325 people who have indicated interest in park activities in July 2001. The purpose of the scoping letter was to describe the proposed action to any interested or affected parties and solicit comments from those who may have concerns with the proposed action. Ten responses to this scoping effort were received. Only five contained comments that were related to the construction of the two 8-plexes. Several of those commentors expressed concern over having housing within the park in general or construction of housing directly on the South Rim itself. (This proposed housing is outside of the historic developed area and over 0.5 miles from the Rim). The remaining comments were in favor of the proposal.

The Environmental Assessment/Assessment of Effect was sent to those members of the public who indicated a desire to review the document during scoping, all affected agencies and tribes, and was made available for public review and comment during a 30-day period ending July 25, 2003. The Hopi Tribe and one private citizen (see errata sheet) provided comments regarding the application of mitigation measures for the pre-

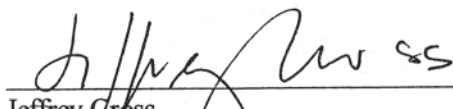
historic archaeological site that is adjacent to the construction site. A more detailed description of the mitigation measures was provided to those commentors. One comment was received in favor of the proposed action.

CONCLUSION

The preferred alternative does not constitute an action that normally requires preparation of an environmental impact statement (EIS). Negative environmental impacts that could occur are negligible to moderate in effect. There are no unmitigated adverse impacts on public health, public safety, threatened or endangered species, sites or districts listed in or eligible for listing in the National Register of Historic Places, known ethnographic resources, or other unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, cumulative effects, or elements of precedence were identified. Implementation of the action will not violate any federal, state, or local environmental protection law.

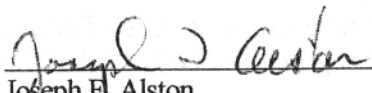
Based on the foregoing, it has been determined that the project does not constitute a major federal action significantly affecting the quality of the human environment and an EIS will not required for this project and thus will not be prepared.

Recommended:


Jeffrey Cross
Science Center Director, Grand Canyon National Park

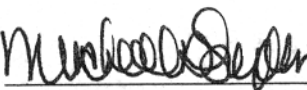
10/15/03
Date

Recommended:


Joseph F. Alston
Superintendent, Grand Canyon National Park

10/16/03
Date

Approved:


Stephen P. Martin
Director, Intermountain Region

10/21/03
Date

Errata Sheet

Page 38: Under Alternative B - Preferred, Cumulative Impacts. Remove the following inapplicable sentences that were erroneously included in the document: "These other foreseeable developments also have the potential to compromise the district/landmark's architectural integrity to a minor degree or to visually alter the district/landmark's historic setting as a result of new construction. NPS would avoid or mitigate potential adverse impacts by ensuring that new construction adheres to appropriate design guidelines, and that preservation maintenance and/or more comprehensive rehabilitation are carried out in conformance with the Secretary of the Interior's Standards for the Treatment of Historic Properties (1995)."

Comment: We concur that this project will have adverse effects on cultural resources significant to the Hopi Tribe. If Alternative B, the preferred alternative, is selected, we request additional consultation on this proposal.

Response: Under the 1995 GMP and Programmatic Agreement with the AZ SHPO, the finding of adverse effect may be mitigated through development of a mitigation plan involving data collection. The affected site will be protected from construction activities by a substantial fence and a mitigation plan will be developed for data collection prior to occupation of the apartments in collaboration with the Hopi THPO, AZ SHPO, and GRCA Cultural Resources staff.

Comment: Cannot the archaeological site near the project be fenced immediately?

Response: There are thousands of archaeological sites in and around the developed areas of Grand Canyon National Park. The Cultural Resources Manager has determined that identifying these sites with fencing or flagging actually leads to increased disturbance by humans. The site will be fenced throughout construction to prevent inadvertent damage by contractors and inquisitive locals.